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ABSTRACT

The booklet provides an overview of the characteristics of young children with handicapping conditions and the components of effective preschool programs for this population. It then discusses the complex issues and implications of recent legislation (Public Law 99-457, Education of the Handicapped Amendments--1986) mandating preschool programs for the handicapped. The first section lists arguments for and against the provision of preschool programs to handicapped children. The next section looks at eligibility for such programs including identification procedures and issues in assessment. Profiles of preschool programs for handicapped children are given next showing a variety of administrative arrangements, staffing plans, and curriculum models. The essential components of preschool programs are then identified and include: integrated programming, transdisciplinary teamwork, parent participation, interagency cooperation, and transition planning. (DB)

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Preschool Programs for Handicapped Children

by
Barbara L. Ludlow

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Introduction

The passage in 1975 of P.L. 94-142, the Education of All Handicapped Children Act, was a landmark in U.S. education. This formal recognition of the right of all children, regardless of the severity of their handicapping conditions, to have access to a free and appropriate education resulted in a multitude of educational programs in school systems across the country. The success of these programs in remediating learning problems and in modifying maladaptive behaviors led to a new interest in preschool intervention efforts designed to prevent or lessen the effects of handicapping conditions on early child development and later school achievement.

In October 1986 Congress enacted P.L. 99-457, amending the earlier act to extend the right to education to handicapped children ages three through five and to offer financial incentives and technical assistance to school systems for programs for handicapped infants and toddlers from birth to age two. This important legislation heralds another era of program development for the public schools and presents a new challenge for educators. Already almost half of the states have required special education for handicapped preschoolers; the new law will stimulate the development of more and better programs to meet the needs of this special population.

This fastback provides an overview of the characteristics of young children with handicapping conditions and the components of effective preschool programs for this population. It then discusses the complex issues and implications of this recent legislation mandating preschool programs for the handicapped in the nation's schools.

Why Should Preschool Programs Be Provided for Handicapped Children?

Until recently preschool programs for handicapped children have been the responsibility primarily of private organizations or public agencies outside the school system. But recognition of the importance of early intervention efforts for children with handicaps has created a demand for preschool programs in the schools. This need for preschool programs for handicapped students calls for a rethinking of the nature of public schooling in the United States.

In the last two decades, parent groups and community agencies have established early intervention programs across the country for children identified as handicapped or at risk at birth or soon after to provide stimulation and family support during the early childhood years. The success of such intervention programs as the Milwaukee Project, the University of Washington Down's Syndrome Project, and the Meeting Street School convinced educators that preschool programs for handicapped children are necessary if we are to prepare them to function in school and adult environments and reduce the need for custodial care.

Opponents of preschool programs for handicapped children argue that the right to education guarantees equal access, not equal outcome. And since nonhandicapped students receive only elementary and secondary education at public expense, handicapped students are not entitled to preschool education that is not available to the nonhandicapped preschool population. Others cite the high costs of preschool programs

because of the low student-teacher ratio and the need for specialized support services. Still others assert that early intervention services needed by handicapped students are not really educational in nature and could more appropriately be provided by other service agencies.

Proponents of preschool programs stress the benefits to children, parents, and society by maximizing the independence of handicapped individuals so that they can become productive members of the community. They cite studies documenting the effectiveness of early intervention in promoting learning, reducing developmental delays, and ameliorating the negative effects of impairments. And they argue that prevention is a wiser investment than remediation, that the money, time, and effort spent on preschool programs will reduce the overall costs of educating handicapped children in the long run.

It could be argued whether the public schools should be the institution responsible for providing preschool programs for handicapped children. Even advocates of preschool programs are not agreed that the public schools, as currently structured, offer the most appropriate service delivery system. And there is little question that the establishment of preschool programs for handicapped children in the public schools would require major restructuring of the schools and a rethinking of the purposes of public education.

In making decisions about such a major undertaking by the public schools, it is helpful to weigh the arguments for and against establishing preschool programs for handicapped children. The following arguments are those most frequently heard.

Arguments Against:

- The traditional role of the schools is to transmit culture and develop academic skills.
- The schools have no experience in providing services to handicapped children younger than age six.
- Preschool programs for handicapped children in other parts of the world, such as Great Britain and Scandinavia, are offered through public health or social welfare agencies.

- The traditional curriculum does not accommodate instruction in those preacademic and basic survival skills such as motor development, perceptual training, self-care, and basic communication.
- Teachers are trained primarily to present content using group methods with learners of average achievement.

Arguments For:

- The emerging role of the school is to develop the individual potential of all students and to teach functional skills for success in adult life.
- The schools have accepted a philosophy of active intervention in the lives of children in order to foster changes in learning behavior.
- Health and social service agency personnel usually are not trained in specialized instructional techniques and behavior management needed in working with handicapped preschoolers.
- The curriculum reflects a developmental perspective in which, with sufficient guidance and training, children can grow and learn if they are given the opportunity to engage in activites at their own level.
- Educators can be trained to select and adapt instructional strategies to accommodate the specific disabilities and handicapping conditions of individual children.

In weighing the arguments above, we must also consider some value questions. If we accept the proposition that the acquisition of functional skills is crucial for a productive citizenry and that the development of individual potential is fundamental to the maintenance of a democratic government, then it seems only consistent that the establishment of preschool programs for handicapped children in the nation's schools affirms that proposition.

Who Is Eligible for Preschool Programs for Handicapped Children?

Preschoolers with handicaps exhibit a wide variety of physical impairments, learning disorders, behavior problems, and developmental delays, ranging from mild to severe or multiple disabilities. Children like those described below are likely to be found in special preschool programs.

Kevin. Although delivered four weeks prematurely, Kevin was adopted during the first month of life. His growth and development were slow. At five months, his adoptive parents noticed a lack of movement in his left arm. A neurological exam revealed a brain cyst. Now four years old, Kevin's receptive language is adequate but his speech is characterized by one- or two-word phrases and many articulation errors. His gross motor, fine motor, and self-care skills are delayed, and all his movements are awkward and uncoordinated.

Libby. Libby is 17 months old, with spina bifida and hydrocephalus (excess cerebrospinal fluid). Since birth she has undergone eight surgical procedures, including two shunt placements to drain fluid from the brain. She is severely delayed in all developmental areas with skills in the 3- to 11-month range. A relaxed child, she smiles and laughs during interaction with others. She localizes sounds, tracks objects, and vocalizes vowels. She is able to hold her head up and support weight on her arms for short periods of time.

Eddie. A chubby, three-year-old blond, Eddie has Down's Syndrome. He walks independently, if somewhat off balance, and has some difficulty with tasks requiring eye-hand coordination, such as block stacks and form boards. He can label a few objects and make simple requests, and he understands basic commands. His imitation skills are excellent and he likes to mimic the acts of others. He responds well to adult attention, although he sometimes uses temper tantrums to avoid doing things he does not enjoy.

Christa. Christa at 18 months is small for her age; her condition has been diagnosed as severe cerebral palsy with spastic involvement of all four limbs. She has no apparent movement or sensation below the waist and only limited movement of the arms and hands. Her mother claims she recognizes the intent behind Christa's gutteral vocalizations. She eats only baby food and takes a long time to finish meals because of poor suck-swallow coordination. She can turn her head from side to side but cannot hold it up at all.

From the variety of impairments exhibited by the children described above, it is clear that definitions of handicap cover a wide variety of conditions. Federal law and most state eligibility guidelines recognize that handicapped young children rarely fit into neat classifications. Therefore, they specify merely that children who manifest obvious physical, sensory, or neurological impairments or significantly delayed development may be eligible for programs for handicapped preschoolers. Following are descriptions of the major classifications of handicap.

Moderate to Severe Handicap. Children with moderate to severe handicaps are characterized by a general maturation level of one-half or less than expected on the basis of their chronological age in one or more areas of development. For example, a severely handicapped child of four may demonstrate motor, social, or cognitive skills more typical of a two-year-old. Moderate to severe handicapping conditions may result from cerebral palsy, Down's syndrome, and congen-

ital rubella. These children often are identified at birth or soon after by medical personnel during a physical examination. With multiple handicapping conditions, impairments are manifested in several areas of functioning: communication, locomotion, self-care, play, interactions with others. These children need programs providing basic skills to promote independence (eating/feeding, toileting, sensory perception, gross and fine motor tasks).

Mild Handicaps. Children with mild handicaps are characterized by a noticeable delay or deviation in some developmental sequence typically demonstrated by children of the same chronological age. Frequently a mildly handicapped child of four is indistinguishable from a nonhandicapped four-year-old except in one developmental area. Conditions that may result in mild handicapping conditions include prematurity, environmental deprivation, and postnatal infections. These children often are identified by their parents or professionals during the preschool years through comparisons with their chronological peers. Such comparisons might indicate mild retardation or slight deviations in physical, sensory, cognitive, and socioemotional development. But the impairments are highly individualized with average or even above-average performance in some areas, such as locomotion, self-care, play, and physical interaction, but depressed performance in communication and verbal interaction, for example. These children need programs that will help to remediate developmental delays, teach preacademic tasks, and train social skills needed for school entry.

"Invisible Handicaps." Some children will manifest handicaps later, ones that are not easily recognized during the preschool years. Learning disabilities and behavior disorders may not be identified in young children because they remain "invisible" until the demands of the school environment and academic tasks elicit them. Conditions that may result in such invisible handicapping conditions include familial genetic factors, motivational disorders, and incongruity between home and school expectations. These children usually are identified by kin-

dergarten teachers when they fail at academic or structured social tasks or when there appears to be a discrepancy between their potential ability and their achievement in one or more areas of functioning. Their impairments may be manifested in failure to learn to read or in behavior problems such as hyperactivity and distractability. These children need programs that provide a structured environment to develop self-control and remedial instruction to develop basic learning skills.

Identification Procedures

Identifying young children with handicaps for placement in special preschool programs is a complex process. Preschoolers with obvious physical or sensory impairments are recognized readily by family members and medical personnel early in life. Some children are referred for assessment when parents notice a failure to demonstrate expected developmental progress or when they display unusual behaviors. Other children may be referred for further evaluation by professionals who recognize that they fall into an "at risk" category because of a medical, developmental, or family history suggesting the possibility of developmental delay or suspected disability.

The primary purpose of preschool assessment is to identify developmental delays and disabilities that would indicate eligibility for special education or other services. Medical examinations, including vision and hearing screening, neurological tests, and neurodevelopmental measures, are required to detect sensory deficits, physical impairments or illness, and damage to the brain and spinal cord. Standardized norm-referenced tests, such as the Bayley Scales of Infant Intelligence and the Denver Developmental Screening Test, are administered by psychologists to determine developmental level and the degree to which the child differs from chronological age peers. Children who manifest physical or sensory impairments or a level of functioning 75% or less than that expected on the basis of their age generally are considered to be eligible for special programs.

Another goal of assessment is to provide information for developing an Individualized Education Plan (IEP) for the child prior to placement in a special preschool program. Criterion-referenced instruments, such as the Brigance Diagnostic Inventory of Early Development or the Learning Accomplishments Profile, provide measures of the child's performance in hierarchies of skill development in the motor, cognitive, social, and language domains. These instruments can pinpoint the child's strengths and weaknesses and suggest objectives for instructional programming. The IEP translates assessment information into curriculum goals, a sequence of instructional objectives, and teaching methods/materials designed to accommodate the child's individual abilities and disabilities.

Screening. Often the initial step in the identification of preschoolers with handicaps is mass screening. A battery of tests is offered free of charge to the general public at a convenient location. These easy-to-administer tests identify children who need more intensive assessment to confirm suspected disabilities or developmental delays. Such screenings often locate young children whose mild handicapping conditions have gone unnoticed by parents and physicians.

Diagnosis. Children identified through screening or who exhibit obvious impairments are referred for further diagnostic testing. This involves a multidisciplinary team using a variety of instruments that can be administered without undue interference from any known impairments. The team might include medical personnel, developmental psychologists, special educators, speech/language clinicians, and physical or occupational therapists. Their assessments are intended to compare the child's performance with that of peers and to identify any skill deficits. Appropriate testing uses the child's primary language, avoids cultural bias, and accommodates specific handicaps.

Placement. Once all assessment data have been collected, the multidisciplinary team and the child's parents meet to determine if a special preschool program is needed, what the most appropriate placement would be, whether related services are required, and what kind of

learning outcomes are desired for the child. The team outlines the special preschool program and other services to be provided, designates responsibilities of all personnel, and specifies curriculum goals and instructional objectives on the IEP. The IEP is reviewed annually, following additional assessments, to determine needed changes in the child's program.

Issues in Assessment

The selection of appropriate instruments to identify preschoolers with handicaps is a critical issue. Some have questioned the value of traditional developmental measures used with young children for predicting later problems in school. Others have criticized the validity of these instruments in light of the wide range of developmental differences seen in nonhandicapped, presumably "normal" children. Still others oppose the use of such instruments for being culturally biased, thus tending to identify too many minority group children as delayed or handicapped. The issue of developing valid, appropriate, and easy-to-use assessment instruments is a matter of continuing debate.

Another important issue in assessment is the difficulty of testing young children. Many examiners have little or no experience in assessing preschoolers, who have limited language abilities and short attention spans, are easily distracted, and may have difficulty in understanding directions. Children may fail to respond correctly because of fear of the examiner or unfamiliarity with the testing situation. Testing may not provide sufficient information to indicate the presence of real handicaps, or it may suggest handicaps when there are none. It goes without saying that training in specialized techniques is needed by all examiners engaged in identifying preschoolers in need of special programs.

A third crucial issue is the over-reliance on information collected from parents about their child's performance. The accuracy of parental reporting procedures is confounded by their inability to recall and

interpret behavior and their desire to present their child in a favorable light to themselves and to others. It is not uncommon for parents to over- or underestimate their child's ability or to disagree substantially with the judgments of professionals. Parental reports should be supplemented and verified by information from other sources, and examiners must use careful questioning and interviewing strategies to ensure data accuracy.

Profiles of Preschool Programs for Handicapped Children

Preschool children with handicapping conditions are educated in a variety of settings designed to accommodate their individual needs and disabilities. Common elements of these preschool programs are administrative arrangements for delivery of services, a staffing plan for personnel involved, and a curriculum model for instruction. But each program has unique features reflecting geographic and sociocultural considerations, service needs, and varying theoretical perspectives. The following descriptions of three preschool programs for handicapped children illustrate both their common and unique aspects.

Joan Lupp works in a rural area as a home trainer for handicapped children under the age of two. Twice weekly, she drives to their homes and spends at least an hour with each family. Joan works directly with the children on activities designed to stimulate their motor and cognitive development. She also teaches the parents how to conduct training exercises with their children using routine family activities and games. Sometimes Joan offers advice to parents on problems they encounter in dealing with their child or helps them to locate needed resources in their communities.

Ted Sharp teaches a small group of three- and four-year-olds with severe handicaps. His classroom is located in the kindergarten wing of the local elementary school. The children are brought to class by a special bus at 8:30 a.m. and returned home at 1:30 p.m. Ted and

his aide work with the children individually and in small groups teaching them feeding, dressing, and toileting skills. A physical therapist and language clinician visit the class three times each week. One evening every month, Ted holds a session for parents in which he presents ideas for teaching the children at home and encourages the parents to share their problems and solutions.

Lora Stevens operates a Head Start Program in which preschoolers with mild handicaps are mainstreamed with nonhandicapped students aged four and five. The curriculum focuses on preacademic and social skills needed for success in school. Lora uses nonhandicapped students as models and peer tutors. She adapts teaching materials to accommodate the children's physical and sensory impairments. When children are ready to leave the program, she works with the kindergarten teacher to ensure a smooth transition to regular school.

Administrative Arrangements

There are three common administrative arrangements for delivery of services and assignment of staff: home-based programs, center-based programs, and combination home- and center-based programs.

Home-Based Programs. In home-based programs, the teacher and other specialists travel to the child's home to provide direct instruction, parent training, and consultative services. This arrangment is used more frequently with infants and toddlers, with multiply handicapped or seriously ill children, or with rural families who have no access to transportation. In some programs there is direct intervention to provide sensory stimulation, gross and fine motor skills training, and activities to foster language use and social interactions. In others, home trainers show parents simple techniques for teaching skills in self-care and play, as well as strategies for managing problem behaviors; and they offer counseling and information about available resources. Most programs provide both direct intervention and parent training for maximal effect on the child's development. The

advantages of home-based programs are convenience for families, recognition of the important role of the parents on early training, and delivery of needed services to very young or critically ill children.

Center-Based Programs. Center-based programs offer services to children and their parents who travel to an educational center at regularly scheduled times. The center's multidisciplinary staff provide direct instruction to children singly or in small groups, as well as training for parents on an individual or group basis as needed. This arrangement is more appropriate for handicapped preschool children in good health and is operated more easily in urban areas with sufficient public and private transportation. During the day, staff provide intervention for gross and fine motor activities, cognitive/sensorimotor training, language instruction, and structured opportunities for play and social interaction. In the evenings, they hold seminars, conduct group counseling, and arrange individual training sessions for parents and siblings. The advantages of center-based programs are more efficient use of staff time, opportunity for interaction with other families, and activities to foster learning through observation and modeling.

Combination Programs. Combination home- and center-based programs can serve a broader group of handicapped preschoolers. At the center, direct instruction is provided for three- to five-year-olds and group sessions are held for parents. Home visits are made to families with infants and toddlers or those who need individualized training to manage severe handicaps or serious behavior problems. A combination arrangement is best used when serving a diverse group of children with wide variation in educational needs. Combination programs offer the advantages of both home- and center-based arrangements.

Staffing Plans

Federal and state laws mandate the provision of free, appropriate education and related services to handicapped children. To be appropriate, education must meet the child's individual needs and be

equal in quality to that provided to nonhandicapped children (that is, trained teachers with adequate materials and equipment working in suitable settings). Related services include transportation, speech and hearing services, physical therapy, psychological services, and medical services. These services for handicapped preschoolers generally are provided by special educators and other specialists whose roles are described below.

The Special Educator. Special educators have training and experience in curriculum, instruction, behavior modification, classroom management, and consultation skills appropriate to the education of young children with handicaps. They are responsible for arranging the classroom environment, writing lesson plans, selecting materials, delivering instruction, managing individual and group behaviors, and evaluating a child's progress. In addition, they are expected to train, supervise, and monitor any paraprofessional personnel working with handicapped preschoolers and to conduct parent conferences and training sessions as needed. A special educator generally is designated to coordinate the efforts of other specialists serving the preschool program. To manage this multidisciplinary team, the educator must be proficient in assessment, prescription, and adaptation of materials to specific disabilities; must be knowledgeable about the services of other disciplines; and must be able to communicate effectively with other professionals.

The Speech/Language Clinician. Speech/language clinicians have specialized training and clinical experience in assessing, diagnosing, and remediating disorders of communication, language, and speech in young children. They are responsible for assessing skills in pronunciation, vocabulary, and overall communicative effectiveness and for developing individualized therapy plans to develop missing or delayed skills. They provide consultation to the special educator and training for the parents to enable them to carry out speech/language therapy activities in the home and classroom. The speech/language clinician should be proficient not only in specialized therapeutic techniques but

also in accommodating these techniques to nonclinical settings and in demonstrating them to teachers and parents.

The Physical/Occupational Therapist. Physical and occupational therapists receive extensive training in anatomy and physiology, as well as in the exercises needed for developing muscle tone, posture, and movement. They also learn special techniques for positioning and handling young children with physical handicaps in order to maximize independent functioning. Physical therapists generally are involved in activities for developing large-muscle movements for control of the body and limbs, while occupational therapists work to establish fine motor manipulation and eye-hand coordination. These therapists not only work directly with the handicapped child but also suggest effective exercises and adaptive equipment that parents and special educators can use. Because of their knowledge of medical terminology and physiological development, they may also serve as a liaison between school personnel and medical specialists.

The Psychologist/Counselor. Psychologists and counselors are trained to identify and manage behavioral, social, and emotional problems in young children with handicaps. They are responsible for assessing socioemotional development, designing behavior management programs, and offering counseling services to children, their familes, and staff as needed. They must demonstrate unusual sensitivity to the feelings of others, be skillful in recognizing motivations for certain behaviors, and have superior interviewing skills for eliciting and clarifying the statements of children and adults.

The Medical Personnel. Medical personnel assigned to preschool handicapped programs (usually school nurses) have special training that allows them to conduct some of the medical services needed by young handicapped children. They may be asked to administer medication following a physician's prescription or to perform such special procedures as catheterization (tube drainage of the bladder), cleaning of the tracheotomy tube (opening an airway in the trachea), or percussion drainage (pounding the lungs to remove fluids). They also

may offer emergency assistance for children who lose consciousness, choke on food, or experience severe seizures. When school nurses are not available, special educators or paraprofessional personnel are sometimes required to assume these responsibilities after appropriate training.

Curriculum Models

Curriculum models organize instruction according to a specific theoretical perspective and specify the type of activities in which children and teachers engage. Most programs follow either a developmental or a functional curriculum model.

Developmental Model. This model applies the developmental theories of Piaget, Gesell, and others to the preschool curriculum. Handicapping conditions are viewed as a failure to acquire skills in the normal developmental sequence. Diagnosis consists of identifying the child's degree of discrepancy from the norm, and intervention is aimed at enhancing the development of delayed or missing skills. The curriculum for handicapped preschoolers is identical to that of traditional early childhood education. Activities include games to develop motor and social skills, manipulative tasks for cognitive development, and storytelling and field trips to encourage language use.

The developmental model is most appropriate for mildly handicapped children with minimal developmental delays. It is not appropriate for severely handicapped children whose slower rate of learning and multiple disabilities would require too much intervention time, and the focus on skills may be neither age-appropriate nor relevant to the child's actual level of functioning. This model allows use of commercial curriculum materials that are widely available and readily adapted for remedial use.

Functional Model. This model emphasizes skills that improve the child's control over immediate and future environments, with the goal of teaching appropriate behaviors for specific situations. Diagnosis involves an analysis of a child's existing skills, an inventory of en-

vironmental demands, and then identification of the discrepancies between performance and environmental expectations. The curriculum is individualized for each child. Activities involve training in clusters of functional skills related to toileting, feeding and mealtime activities, play activities, and bedtime routines.

The functional model is used with children with moderate to severe handicapping conditions and significant developmental delays. To maximize the impact of instruction, the staff concentrates on the most relevant skills and age-appropriate activities for these children. This model provides training in natural settings, using functional materials that can be adapted to accommodate specific handicaps through modification of task requirements.

Essential Components of Preschool Programs for Handicapped Children

The essential components of preschool programs for handicapped children include integrated programming, transdisciplinary teamwork, parent participation, interagency cooperation, and transition planning.

Integrated Programming

Integrated programming provides opportunities for handicapped preschoolers to interact with their nonhandicapped peers. Federal law requires placement in the least restrictive environment in order to provide normal contact with peers. Educators have long recognized that peers have an important role to play in modeling and reinforcing appropriate behaviors and in developing communication and social skills. Some peers may even serve as tutors for training and practice in preacademic and self-care tasks. An additional benefit for nonhandicapped children is that they become more accepting of those who are different, and they learn interpersonal skills for interacting with handicapped people.

There are a variety of ways to implement integrated programming. Handicapped children can be mainstreamed into a regular preschool program for all or part of the day. Children with mild handicaps can function quite successfully in such settings with some support. Example: Although spina bifida limits Lisa's mobility, she has adequate visual perception, fine motor skills, and normal language ability. She

attends preschool with her nonhandicapped peers but receives physical therapy services on a consultative basis.

Another way of integrating programming is locating the preschool for handicapped children adjacent to regular preschool classrooms and scheduling periodic opportunities for interaction. Children with mild handicaps may spend substantial periods of time in the regular class; even those with severe handicaps may be involved with peers through observation or partial participation. Example: Severe spastic cerebral palsy has left Terry nonverbal and nonambulatory with few coordinated body movements. During recess his adaptive chair is positioned on the playground so he can watch the other children at play. He responds to their activity by smiling and vocalizing.

A third way of integrating programming is by "reverse mainstreaming" of nonhandicapped children into preschool programs for children with handicaps. This is especially useful for children with severe or multiple handicaps who need some contact with peers on a regular basis, even though they will require individual attention and one-on-one instruction. Example: An aide brings two children from the regular preschool during play time to demonstrate to Cindy, who is physically impaired and deaf, how to play with manipulative toys. The children show Cindy how to roll a ball, hug her when she performs correctly, and roll the ball back to her.

Transdisciplinary Teamwork

Transdisciplinary teamwork ensures more efficient and effective delivery of services to handicapped children. Federal law guarantees that identification, placement, and service be provided by a team of qualified professionals. The multiple needs of young children with handicaps require coordination of efforts by a variety of professionals. The transdisciplinary team goes beyond merely sharing information about a case from each team member's area of professional expertise. They demonstrate special techniques and provide training so that others on the team can use their specialized knowledge to im-

prove service delivery. These professionals allow others to assume their role in providing service, and they incorporate the role of other team members into their own activities. Through coordination of their efforts, the transdisciplinary team enhances the learning outcomes for handicapped preschoolers by providing multiple opportunities for practice and transfer of training. The following case study illustrates how the transdisciplinary team works.

Three-year-old Jamie has severe athetoid cerebral palsy. He sits in an adaptive chair with head support but has no use of his hands except for random flailing movements. Abnormal posture and fluctuating muscle tone interfere with feeding, self-care, and simple learning tasks. He communicates with eye blinks when someone scans his picture communication board.

The special educator uses adapted materials and physical prompts to teach Jamie new skills. She uses positioning techniques and adaptive equipment recommended by the physical therapist. At mealtimes she incorporates language stimulation exercises suggested by the speech/language clinician to develop communication skills. She shares her instructional programs and behavior management techniques with the other professionals on the team.

The physical therapist demonstrates correct positioning and use of adaptive equipment to the teacher and aide. He trains the speech/language clinician to use oral-motor stimulation exercises to prepare Jamie for language lessons. During therapy, he also works on communication goals specified by the speech/language clinician and academic tasks developed by the special education teacher.

The speech/language clinician selects concepts for Jamie's communication board and helps him practice rudimentary articulation skills. She organizes therapy sessions around Jamie's IEP goals designated by the teacher for academic and social skill development and uses positions recommended by the physical therapist to facilitate breathing for speech. She shares language lesson objectives with the other specialists in order to integrate language instruction into all training activities.

Transdisciplinary team work can be facilitated in several ways. By conducting assessment procedures in the presence of the whole team, they can record observations pertinent to their own discipline and suggest alternative techniques for providing a more comprehensive assessment. Also, the results of discipline-specific assessment can be shared with other team members for analysis and comment. Example: Steven is deaf and has motor impairments. The speech/language clinician signs directions to Steven during testing. The physical therapist adapts test materials to make them easier for him to manipulate. The special education teacher uses modeling and prompts to encourage Steven to respond to all items.

Writing the Individualized Education Plan (IEP) is another activity that involves the entire transdisciplinary team, with each professional contributing expertise to the selection of curriculum goals and instructional objectives. Input from several team members increases the probability that the IEP will accommodate the child's abilities and disabilities and will be carried out by all who provide services. Example: Beth has little head control and cannot sit without support; her babbling is short and indistinct because of chest compression. The special education teacher writes objectives to teach visual tracking. The objectives are modified by the physical therapist to increase head/back support and include breathing exercises designed by the speech/language clinician to improve phonation.

Still another way the transdisciplinary team works is by designing and implementing the instructional program for a child using the training goals and techniques of all disciplines. Each professional performs some of the functions of other team members during training. Example: Bobby, who has cerebral palsy, is learning to grasp/release objects and to sort them by size. During the sorting exercise, the special education teacher uses positioning to accommodate Bobby's abnormal reflexes; and she also requires Bobby to label each object he sorts. The physical therapist uses relaxation and range-of-motion exercises to improve Bobby's muscle tone for grasping the objects he must sort

and label. During speech therapy, the speech/language clinician uses the physical therapist's positioning and the teacher's instructional materials for language activities.

Parent Participation

Parent participation is essential in preschool programs for handicapped children in order to reinforce at home the interventions carried out at school. P.L. 94-142 stresses the right of parents to participate in decisions and educational processes affecting their child and outlines due process procedures to protect that right. Educators have long recognized that parents are the primary agents in the learning of young children. They also understand the need that parents with handicapped children have for information, training, and counseling. Through participation in preschool programs, parents can learn how to provide instruction in the child's home environment. Following are some suggestions for increasing parent participation in preschool programs.

Parent volunteers can serve as tutors, instructional aides, and supervisors for community-based training and field trips. Through participation, volunteers learn more about the purposes of the preschool program, have an opportunity to observe other adults working successfully with their child, and acquire skills they can use to train and manage the child's behavior at home. Example: Ricky's mother spends two hours every day at lunch time in the preschool program her handicapped son attends. She helps the teacher with the feeding of two children who are learning to feed themselves with a spoon but still have some difficulty with certain food items. She enjoys learning training techniques firsthand and hopes to use them at home with Ricky.

Another means of parent participation is through parent training sessions held on a regularly scheduled basis. Topics addressed are common problems and pressing needs identified by parents, such as toilet training, feeding skills, and health care. Example: Roy Woodrum has established monthly parent training sessions at his preschool for

handicapped children. Each session addresses a specific topic suggested by parents at the previous meeting. Roy invites local experts to make a short presentation or demonstration with audiovisual aids, then asks for questions, discussion, and sharing of ideas from the parents.

Parent education activities also may be conducted through newsletters, brochures, and other print or audiovisual materials that provide information about handicapping conditions, educational programs, and available resources. Example: The staff of the new preschool for handicapped children attached to Wilson Elementary School publishes a monthly newsletter for parents. Each issue contains news about the program, a brief topical piece about a specific handicapping condition, and a resource column describing a local service agency, its staff, and services offered. The newsletter is mailed to parents, professionals who work for community organizations, and other interested persons.

Preschool program staff also may choose to become involved in parent advocacy efforts, either on their own or through community and statewide advocacy organizations. Parent advocates assist parents in dealings with public agencies, inform them of their rights as parents of a handicapped child, and represent or counsel them during hearings and other legal procedures. Example: Jonas Wolfe is severely handicapped and needs a series of operations to correct facial disfigurement and a cleft palate. Marie Boone, Jonas' preschool teacher, contacted the state advocacy office, accompanied the Wolfes to a meeting with the local health agency to discuss financial aid, and has called several surgeons about the procedures needed. She believes her advocacy efforts on the Wolfes' behalf are an important adjunct to Jonas' total program.

Interagency Cooperation

Young children with handicapping conditions often are served by a number of private and public agencies that provide medical, social,

or educational services. Interagency cooperation is necessary to ensure that all needed services are provided in a consistent and effective manner. Handicapped children usually are under the care of not only a pediatrician but also other specialists such as a neurologist, an ophthamologist, or an orthopedic surgeon. Their families may need support services provided by a social worker or public health nurse. In addition to the instructional program in the preschool, handicapped children also receive related services from several specialists. Coordination of these services is necessary to ensure that child and family needs are met, that duplication of expensive services is avoided, and that there is carryover of treatment and programming.

One of the ways to create interagency cooperation is by establishing a coordinating council made up of representatives from each public and private agency in the community that provides services to young handicapped children. These councils meet regularly to work out interagency agreements, review policies, and share information. Example: Sally Jones, a teacher in the preschool program, meets on a quarterly basis with the county social worker, the public health nurse, and the psychologist at the mental health center to coordinate the services provided to handicapped preschoolers. The group is working on a case management system that designates one professional as the primary care provider with responsibility for overseeing the activities of all the agencies that serve a particular family. When operational, they hope the system will ensure that handicapped children and their parents receive all the services they need.

Transition Planning

For children with handicaps to advance successfully from the special preschool program to kindergarten and the primary grades requires careful transition planning. Children with mild to moderate handicaps who have made significant developmental progress may be able to be placed in regular kindergarten or first-grade programs. Those with severe and multiple handicaps will be better prepared to

function in self-contained special classroom programs at the primary level.

Transition planning requires that the preschool teacher visit the elementary school to assess the program and the demands of the new environment. The teacher then can make gradual modifications in the preschool program to prepare the handicapped child for the routines of the new setting. This could involve practicing tasks and learning social interaction skills that will be needed in the new setting. Transition planning also requires providing the personnel in the receiving school with a complete profile of the children who will be arriving. The preschool teacher might even demonstrate the instructional and management strategies that have been used successfully with different children and share information about adapted materials and equipment.

The last component of transition planning is monitoring the child after placement in the new setting. Example: Barry's learning disability was first identified by Mrs. Wilke, his teacher in the Head Start program. In planning for Barry's transition to first grade next year, Mrs. Wilke has visited his first-grade teacher and the learning disabilities specialist at Park Elementary School. To prepare Barry for his new school, she has changed the physical arrangement of her room and modified his schedule. She is teaching him to work quietly in his seat, to stay on task, and to raise his hand for assistance. Next year, she will spend the first week of school visiting Barry in the first-grade class and then contact his teacher once a month to check on his progress.

Conclusion

The passage of P.L. 99-457 in 1986 marked the beginning of a new era for public education in this country. This law acknowledged what special educators have been saying for a long time: Early intervention is effective in preventing or reducing the impact of handicapping conditions on the lives of young children. Now free public preschools can provide the supportive social and training environments needed for young handicapped children to develop and nurture their individual potential.

That such an important responsibility has been entrusted to the public schools is a fitting tribute to this nation's educators, who bring a history of commitment to children and active intervention on their behalf. By their efforts yet another step has been taken toward the long-hoped-for goal of integrating all handicapped people into the mainstream of American life.

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